

Amendments to the Claims:

Please substitute the following clean copy text for the pending claims of the same number.

1. (Currently Amended) A thermal overload and resonant motion control circuit for an audio speaker having a driver, where the audio speaker is driven by a drive signal from an amplifier, the circuit including:

a feedback signal generating (fsg) circuit for generating a feedback signal, said feedback signal being an absolute difference between a proportion of a drive voltage and a proportion of a drive current ~~a function of both drive current to the speaker and speaker impedance~~; and

an attenuator operable in response to said feedback signal for controlling said drive signal, wherein said feedback signal is given by $f(ai, bv)$, where i and v are drive currents and drive voltage respectively for said drive signal, and where a and b are percentages of i and v respectively utilized by said fsg circuit and wherein said attenuator includes a converter which receives said feedback signal and generates a DC output which is a selected function of the received feedback signal, and a variable attenuator component ~~variable impedance component~~ through which one of the input and output of said amplifier is applied, said DC output being applied to control the level of said variable attenuator component ~~impedance of said variable impedance component~~, wherein said drive signal is related to motion of said driver and said drive current.

2. (Cancelled)

3. (Previously Presented) A control circuit as claimed in claim 1, wherein said feedback signal is proportional to the absolute value of $K(bv - ai)$ where K is a gain in said fsg circuit.
4. (Original) A control circuit as claimed in claim 3 wherein $a = b$.
5. (Original) A control circuit as claimed in claim 3 wherein said fsg circuit includes a lowpass filter having a transfer function $H(s)$, and wherein said feedback signal is given by $K(bv - ai) H(s)$.
6. (Original) A control circuit as claimed in claim 3 wherein a is approximately 0.15% to 0.5% and b is approximately 0.5%.
7. (Previously Presented) A control circuit as claim in claim 3 including a sense resistor through which said drive signal is applied to said speaker, said fsg circuit including a component for sensing the current across said sense resistor.
8. (Original) A control circuit as claimed in claim 7 wherein said component is a first differential amplifier, the output from which is (ai) , and wherein said fsg circuit includes a second differential amplifier having the said drive voltage applied thereto and generating an output which is (bv) , and a third differential amplifier having the outputs from the first and second differential amplifier as inputs and having a gain of K , said feedback signal being output from said third differential amplifier.

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9. (Original) A control circuit as claimed in claim 8 wherein said third differential amplifier has a lowpass filter in a feedback loop thereof.

10. (Cancelled)

11. (Previously Presented) A control circuit as claimed in claim 1 wherein said selected function for the feedback signal is at least one of average, peak and RMS.

12. (Previously Presented) A control circuit as claimed in claim 1 wherein said variable ~~impedance~~ attenuator component is at least one of a compressor and a limiter.

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